DOCUMENT RESUME

ED 135 322 HE 008 693

AUTHOR Trivett, David A.
TITLE Continuing Education for the Professions. ERIC/Higher Education Research Currents.
INSTITUTION George Washington Univ., Washington, D.C. ERIC Clearinghouse on Higher Education.
SPONS AGENCY American Association for Higher Education, Washington, D.C.
PUB DATE Feb 77
NOTE 5p.
AVAILABLE FROM Publications Department, American Association for Higher Education, One Dupont Circle, Suite 780, Washington, D.C. 20036 ($.40)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Bibliographies; Certification; *Continuing Education Units; Employment Qualifications; Engineering Education; Engineers; Health Occupations; Literature Reviews; Medical Education; Needs Assessment; Personal Interests; *Professional Continuing Education; *Professional Education; *Professional Occupations; *Professional Personnel; *Professional Training; Psychologists; Technological Advancement

ABSTRACT

Continuing education for professionals (CEP) may be defined as the formal or informal training an individual professional undertakes after the end of his basic professional education. Despite the implicit relationship between professionalism and CEP, continuing education has long been a tangential concern in the study of professional education. As it is, CEP is a complex phenomenon with different forms of organization, varying methods of delivering instruction, and numerous methods for acquiring financial support. Many professions have shown an interest in improving CEP, and there is some awareness that the original professional education will have to be planned with continuing education in mind. New recognition of the need for CEP to serve several purposes (changing licensure regulations, technological advances, and changing personal goals as well as professionalism) is apparent in such fields as psychology and engineering, and its importance is recognized in medicine as well. Programs underway suggest that future CEP efforts will focus on techniques by which individuals can assess needs and prescribe learning activities by evaluation of their own practice. Also in the wings is more debate over the question of legally mandated CEP. (An extensive bibliography is included.) (Author/MSE)

ERIC/HIGHER EDUCATION

American Association
for Higher Education
February 1977

research currents

CONTINUING EDUCATION FOR THE PROFESSIONS

David A. Trivett

Maintenance of knowledge and growth in skill are critical aspects of being a professional. Consider the criteria for professionalism, classical and current, summarized by Anderson (1974):

> Professional activities have a large intellectual component; the skill, craftsmanship or practice of a profession rests on a body of knowledge. This knowledge is not only empirically derived but is also a product of research or scholarly activity. (2) The practice of a professional involves a craftsmanship, meaning knowledge is put to use; this craftsmanship is teachable and learnable, and is socially useful. (3) Society allocates to those who practice a profession a great measure of control of the education for it and the right to be self-policing. The quality of professional service, it is presumed, is to be judged only by other professionals in the same field. Hence a profession is governed by a code of ethical conduct to which its members are held, and the professional person is presumed to be basically motivated by altruism (p.3)[1]

Continuing education for the professions (CEP) may be defined as the formal or informal training an individual professional undertakes after the end of his basic professional education. In the case of the professional who develops a specialty through formal training, CEP is training undertaken after the completion of that specialty education. CEP usually implies efforts to improve or maintain a professional's competence to practice his existing profession, as opposed to training pursued to enter a new specialty or to upgrade general education (from *Continuing Education for Physicians* 1973, pp. 5-6). Although CEP occurs after professional training, it directly supports professionalism. It provides a method by which professionals may maintain their awareness of scholarship in their field and relate new knowledge to the empirically derived knowledge arising from their own practice. It is a method to improve craftsmanship. CEP may also be required through the codes of ethical conduct to which members of a profession subscribe.

Despite the implicit relationship between professionalism and CEP, continuing education has long been a "tangential concern" in the study of professional education (Anderson 1974, p. 10). Now, because the knowledge explosion affects every professional practice to some degree, continuing education is perceived to be more important than ever. Within a few years of his original professional studies, the professional can find his skills obsolete (p.10). Major social developments and changes in the nature of practice may accelerate the coming of obsolescence. The obligations of being professional and the changing nature of knowledge have resulted in the general recognition of the need for continuing education for all professionals (p.10).

As it is, CEP is a complex phenomenon with different forms of organization, varying methods of delivering instruction, and numerous methods for acquiring financial support (pp.10-11). Against this backdrop numerous changes and developments are evident in CEP across several professional fields.

Representative CEP Improvement Efforts

Many professions have shown an interest in improving CEP. Representative of the growing interest is the effort underway within the profession of *psychology* to grapple with continuing education needs. Psychologists and the American Psychological Association (APA) expect psychology to be treated as a profession. To meet the need for professional maintenance of knowledge and craftsmanship, the APA has long sponsored a set of traditional CEP activities. Many state, local, and subgroup organizations have done likewise. Recently, the APA has formalized its continuing education activities by establishing a special office. Proposed activities for this office include the recommendation of standards and guidelines for continuing education, recognition and quality control mechanisms for providers of continuing psychological education, the development of self-assessment techniques, and the establishment of record-keeping mechanisms so that psychologists can maintain records of their own continuing education activity. Certainly one motive for establishing the special office in APA was the awareness of new continuing education and relicensure regulations in several states and their consideration in perhaps 20 additional states (Nygaard, April, September, October 1976). Regardless of motive, the development of programs to assess the learning needs of psychologists, methods for self-assessment of competency, and mechanisms to record learning experiences will no doubt encourage more psychologists to work toward maintenance of knowledge and craftsmanship in their field.

Recognition of a need for continuing education in *engineering* is not surprising, but what seems to be new is an awareness that the original professional education will have to be planned with continuing education in mind (Eisley 1975, p.v). It is reasoned that most of the changes forthcoming in society will be technological; therefore, the knowledge base of engineering will be changing also. Furthermore, engineers modify their personal goals just like everyone else. An engineering education that packs it all in four or five years is not sufficient. In addition, the production of engineers has not kept up with demands for them. Yet demographic trends sug-

Research Currents is prepared by the ERIC Clearinghouse on Higher Education, The George Washington University, Washington, D.C. The material in this publication was prepared pursuant to a contract with the National Institute of Education, U.S. Department of Health, Education and Welfare. Contractors undertaking such projects under government sponsorship are encouraged to express freely their judgment in professional and technical matters. Prior to publication, the manuscript was submitted to the American Association for Higher Education for critical review and determination of professional competence. This publication has met such standards. Points of view or opinion, however, do not necessarily represent the official view or opinions of either AAHE or the National Institute of Education.

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David A. Trivett is a research associate at the ERIC Clearinghouse on Higher Education.

gest that relatively fewer individuals will be studying engineering in the future. Consequently, there is great need for a new type of flexible CEP in engineering that will help meet manpower demands for engineers and will bring older engineers up-to-date. In view of this need, a group of engineering educators assembled at Stanford University to study engineering education concluded:

> We feel that in order to rationally design the portions of an education, education must be considered as a lifetime totality and emphasis placed upon learning in a recurrent mode. Technology does not stay fixed. Neither does the typical engineer. Even if the knowledge he learned in school remained current, he might grow beyond its application. He must be prepared to encounter job changes, new fields, new problems and priorities, shifts toward management, changing family involvement, changes in personal philosophy, and even major career dislocations. All of these speak in favor of recurrent educational opportunities (Eisley, p.24).

Gunderson (1975) describes a special degree program in cybernetic systems at San Jose State University that meets several engineering-related CEP needs. The program permits mid-career engineers to learn new tools and develop different career directions by studying cybernetic systems in a graduate program. Moreover, the program is designed so that those without engineering background can attain the necessary quantitative skills and apply their own training and experience to social and technical problems requiring a cybernetic approach via new engineering knowledge. In Gunderson's words "The Program recognizes that social, biological, and physical systems may be treated analogously. . . . These are all cybernetic (feedback) systems and involve input, output, sensors and feedback. The same mental skills are essential to the analysis and synthesis of each " (p. 6). Many other traditional and experimental efforts are underway to improve the availability and quality of CEP in engineering (see Burgwardt and Biedenbach 1975; Dubin, Shelton and McConnell 1974; Eisley 1975; Katz 1975a; Kaufman 1974; and Williams 1975 for examples).

Continuing Medical Education

Continuing medical education is an extensive endeavor often supported by professional groups, medical colleges, clinics, and the states. Typically, a medical center will collaborate with a professional society to bring in a specialist who will make a presentation to geographically restricted practitioners. Such programs are normally of short duration (such as one or two days) and may be designed so that the physicians or other medical care personnel in attendance may maintain their regular practice schedules. Often continuing education activities are a component of professional society meetings (Anderson 1974, p. 11). Although continuing education in medicine is already more extensive than in several other professions, there is increasing discussion of the need for CEP in medicine, as well as study and analysis of professional needs, analysis and theorizing over the most effective CEP mechanisms, and numerous descriptions of individual programs.

The World Health Organization assembled a committee of experts to study the worldwide need for improved continuing education for physicians (*Continuing Education for Physicians* 1973). The committee observes that "Rapid development in new medical knowledge and accelerating change in methods of delivering health care have made continuing education an issue of critical importance. Professional obsolescence is inevitable unless physicians make a personel commitment to lifelong learning and are provided with opportunities to fulfill that commitment" (p.5). In their judgment, continuing education should be an integral part of medical education and not just attendance at periodic refresher courses. Furthermore, they tentatively conclude that continuing education programs rarely consider the actual need of the health services in individual countries (p.7). Finding little evidence of incentives for physicians to continue learning or of progressive instructional methods or of evaluation of CEP efforts, they suggest that the place to begin improvement of CEP in medicine is at the medical school, an institution they regard as dominated by a spirit of reward for concealing ignorance (p.10). However, their major criticism of traditional CEP efforts is directed at the procedure of offering programs and information without relation to needs of medical practice. Hence, they urge the adoption of CEP techniques that focus on the prior self-assessment-of-learning needs by physicians, the selection of appropriate learning activities by the professional, and the use of *formative* evaluation by the physician to determine the efficacy of the CEP he has sought. Of major importance is the evaluation of continuing education efforts through the assessment of competencies demonstrated by practicing physicians, that is, an evaluation of the effect of continuing education on medical practice (pp. 11-15).

The less-than-enthusiastic CEP participation rate by many medical professionals is a consistent theme. Kubat randomly sampled the continuing education activity of nurses registered and practicing in a Midwestern state (Kubat 1975, pt. 1, p.23). She compared continuing education activity with demographic characteristics, with nursing knowledge (on a 25-item test), and with attitudes towards continuing education. Although most of the nurses responding had taken their state board examinations more than 10 years prior to the survey, only 11 *percent* of the respondents had taken a refresher course since their board examination (p.24). Kubat observes:

> Many nurses did not view continued learning as an essential activity in maintaining the level of competency they possessed at the time of graduation from a school of nursing. A majority of the nurses, irrespective of their age, number of years since taking the [state board examination], employment status or area of practice, thought they were as qualified as when they had graduated. Yet . . . the majority of nurses in the sample indicated they had not attended a continuing education activity (p.26).

Arndt, DeMuth, and Weinswig (1975) analyzed the continuing education activity of 2,700 Wisconsin pharmacists applying for relicensure. Over a 5-year period (1969-1973), 43.8 percent of the pharmacists had participated in a sponsored continuing education activity (p.264). Generally, those with better credentials, those who were active in professional organizations, those who were full-time (as opposed to part-time), and pharmacists practicing in hospitals were more likely to have been participants in CEP (p.266). Although neither of these studies can be generalized to the population of nurses, pharmacists, or other health care personnel in the U.S., they suggest the need for approaches to CEP in medicine that more forcefully involve practitioners.

Relating CEP to Medical Practice

One approach to the improvement of continuing medical education is referred to as the "bi-cycle" approach. It features the systematic interrelation of two cycles. In cycle one, medical-care problems are analyzed after the careful evaluation of records and the comparison of actual treatment with the ideal. A second cycle is inte-

grated with cycle one. Cycle two begins with the decision that a medical treatment problem can be solved by an educational action. Educational objectives are specified and learning activities selected to accomplish the objectives. Upon completion of learning activities by the medical-care personnel involved, patient care is reevaluated. If further educational activity is indicated, learning activities and objectives are again selected and specified (see Brown and Uhl 1970; Charters and Blakely 1974; Fleisher 1974; Knox 1974). This approach embraces several general ideas on the improvement of CEP. It focuses on the improvement of patient care [i.e., *practice*] as the purpose for CEP. A clear objective is specified. Participants gain motivation from the solution of a medical-care problem. The approach mirrors the scientific, problem-solving, treatment-prescribing-and-evaluating cycle in medicine. Professionals are involved in the establishment of criteria for success (both medical and educational), in the design of learning activities, in the evaluation of outcomes and in the prescription of further steps. Thus, practice-oriented, problem-solving approach is consistent with medical practitioners' self-perception as adult learners and professionals. The feedback derived from change in practice and improved patient care also stimulates future CEP participation. Finally, many other developments in medical education and medical-care delivery can be integrated with this approach. For example, improvements in medical recordkeeping and care audit clarify patient care problem areas in cycle one. Technologically based improvements in resource delivery, such as telephone access to consultants and computerized identification of relevant medical literature, can be employed in the design of learning activities (cycle two). Furthermore, the bi cycle model extends to methods for the improvement of individual practice, such as the individual physician practice profile analysis (Silverston 1973). In this approach, the practice record of a physician is analyzed, his competence assessed through a tailored examination, and an improvement program is mapped with the assistance of a consultant. Thus, on a microscale, patient-care needs—or needs arising from professional practice—determine the educational objectives and learning activities the physician pursues.

In other corners of medical practice, CEP serves to stimulate new approaches to professional practice itself. Some *pharmacists* are reassessing their professional activity, placing more emphasis on providing drug-use advice for patients and physicians, and enlarging their drug-use monitoring role. The rationale is that patient benefit from prescription medicines will increase when pharmacists explain labels or intervene when a patient has prescriptions for two drugs that interact in a harmful manner. The training pharmacists have should make them competent to perform these roles; yet practicing pharmacists may hesitate because they do not perceive the proactive role as appropriate or because they lack knowledge about specific drug-use patterns. Watkins, Norwood and Meister (1976) describe a continuing education program created to change the knowledge and attitudes of practicing pharmacists with respect to their role as drug advisors. Under the ruse that a programmed text was to be evaluated, control and experimental groups of practicing pharmacists were provided a programmed text on drugs employed to combat urinary-tract infections. The experimental group was given the text first. Then, their behavior in dealing with fake patients submitting test prescriptions was observed and recorded by the fake patients. The pharmacists' knowledge and attitudes were appraised by a written questionnaire. The control group was also rated by fake patients and their knowledge and attitudes evaluated prior to receipt of the text. Although the anticipated change in attitude did not follow after reading the text—control and experimental group pharmacists expressed similar attitudes about the desirable role of pharmacists in drug advising—the experimental group had a significantly higher *knowledge* score and a significantly higher *behavior* score. That is, when tested, the experimental group that had read the programmed text was found to know more about the interaction of drugs used in urinary-tract infections. Furthermore, they acted on their knowledge by warning patients of possible side-effects and telephoning doctors to advise them of possible harmful effects from patient use of incompatible drugs. Watkins, Norwood and Meister conclude that continuing education programs can increase knowledge and change behavior of participating pharmacists.

Conclusion

CEP is an essential component in maintenance of professional behavior, the application of knowledge, and craftsmanship in practice. Although CEP is a traditional activity for professionals, new recognition of the need for CEP to serve several purposes is apparent in professional fields such as psychology and engineering. Likewise, in medicine new recognition is being given to CEP. Although doubts arise concerning the low CEP participation rate of some medical-care personnel, methods are being explored to tie CEP more closely to educational needs originating in medical practice. In addition to its role in providing learning activities responsive to practice-originating problems, CEP also may be employed to up-date the practice of medical professionals, such as dispensing pharmacists.

Programs underway suggest that future CEP efforts will focus on techniques by which individual professionals can assess needs and prescribe learning activities in response to evaluation of their own practice. Also in the wings is more debate over the question of legally mandated CEP. Fundamental questions persist regarding the degree to which exposure to CEP (voluntary of involuntary) changes knowledge, the extent to which knowledge affects competence, and how much competence affects practice.

BIBLIOGRAPHY

Anderson, G. Lester. *Trends in Education for the Professions*. ERIC/Higher Education Research Report No. 7, 1974. Washington, D.C.: American Association for Higher Education. ED 096 889. MF-$0.96; HC-$3.71.

Arndt, Jack R., DeMuth, James E., Weinswig, Melvin H. "Participation of Wisconsin Pharmacists in Continuing Education, 1969-1973: A Preliminary Report." *American Journal of Pharmaceutical Education* 39 (August 1975): 264-266.

Bernardi, Vincent W. "An Analysis of Pharmacist Participation in and Attitudes Towards Continuing Education." *American Journal of Pharmaceutical Education* 39 (August 1975): 266-271.

Bonn, Robert L. *Continuing Education Participants: Who—How Many—Types of Program—Attitudes*. Richmond, Va.: Society for the Advancement of Continuing Education for Ministry [1975]. ED 120 413. MF-$0.96; HC-$1.88.

Brandt, Edward N., Jr. "An Experiment in Continuing Education Developed for the Annual Meeting of a Professional Society." *Journal of Medical Education* 49 (December 1974): 1189-1191.

Brown, Clement R., Jr., and Uhl, Henry S.M. "Mandatory Continuing Education: Sense or Nonsense?" *Journal of the American Medical Association* 213 (September 7, 1970): 1660-1668.

Burgwardt, Frederick C. and Biedenbach, Joseph M. *CES Directors Handbook*. Washington, D.C. American Society for Engineering Education, 1975.

Charters Alexander N., and Blakely, R. J. "The Management of Continuing Learning: A Model of Continuing Education as a Problem-Solving Strategy for Health Manpower." In *Fostering the Growing Need to Learn. Monographs and Annotated Bibliography on Continuing Education and Health Manpower*. DHEW Publication No. HRA 74-3112. Rockville, Maryland: U.S. Department of Health, Education, and Welfare, Public Health Service, 1974. Pp. 1-64.

Continuing Education for Physicians. Report of a WHO (World Health Organization) Expert Committee. Technical Report Series No. 534. Geneva, Switzerland: World Health Organization, 1973. ED 102 917. MF-$0.96; HC-Not Available from EDRS.

Currie, Bruce F. "Continuing Education from Medical Periodicals." *Journal of Medical Education* 51 (May 1976): 420.

"Dentists Assess Their Competence With Self-Administered Exams." *ETS Developments* 20 (Winter 1973): 1.

Dubin, Samuel S., Shelton, Howard and McConnell, Joan, eds. *Maintaining Professional and Technical Competence of the Older Engineer—Engineering and Psychological Aspects.* Washington, D.C.: American Society for Engineering Education, 1974.

Eisley, Joe, ed. *Engineering Education and a Lifetime of Learning.* A Study by the Stanford-Ames Summer Faculty Workshop in Engineering Systems Design. Washington, D.C.: American Society for Engineering Education, 1975.

El-Khawas, Elaine H., and Kinzer, Joan L. *A Survey of Continuing Education Opportunities Available to Nonacademic Scientists, Engineers, and Mathematicians.* Higher Education Panel Reports, Number 23. Washington, D.C.: American Council on Education, Higher Education Panel, April 1975. ED 105 794. MF-$0.96; HC-$2.27.

Fenderson, Douglas A. "University of Minnesota Rural Physician Associate Program/Continuing Medical Education." Unpublished program description, November 1975.

Fink, C. Dennis, and Bushnell, David S. *The Development of an Action Plan for a Post Graduate School of Occupational Health.* Final Report 76-15. HumRRO FR-ED-76-15. Alexandria, Va.: Human Resources Research Organization, July 1976. HE 008 329. *RIE* March 1977. MF-$0.96; HC-$4.97.

Fleisher, Daniel S. "Priorities and Data Bases: Their Relationship to Continuing Education." In *Fostering the Growing Need to Learn*, Q.v., Pp. 199-224.

Fostering the Growing Need to Learn. Monographs and Annotated Bibliography on Continuing Education and Health Manpower. DHEW Publication No. HRA 74-3112. Rockville, Maryland: U.S. Department of Health, Education, and Welfare, Public Health Service, 1974.

Frandson, Phillip E. *Continuing Education of the Professions: Issues, Ethics, and Conflicts.* Paper presented at Meeting of National Association of State Universities and Land Grant Colleges, Kansas City, Missouri, July 8, 1975. ED 117 634. MF-$0.96; HC-$1.88.

Gamble, Connolly C. *Continuing Education for Ministry—Perspectives and Prospects.* Address to Annual Meeting of SACEM, June 16, 1975. ED 113 550. MF-$0.96; HC-$1.88.

Groff, Warren H., Executive Director, Consortium for Health Education in Northwest Ohio. Conversation with author, September 17, 1976.

Gross, Steph M., Romano, Joseph A. and Wiener, Matthew B. "Continuing Education in a Large Metropolitan Area—New York City." *American Journal of Pharmaceutical Education* 39 (August 1975): 271-274.

Gunderson, Norman O. "The Development of a Continuing Education Program for Mid-Career Professionals." Paper presented at the Annual Meeting of the American Society for Engineering Education, Fort Collins, Colorado, June 16-19, 1975. ED 118 435. MF-$0.96, HC $2.27.

Kalman, Samuel H., Director of Education, American Pharmaceutical Association. Conversation with author, November 24, 1976.

Katz, Israel. "An Emerging Role for Universities." In *CES Directors Handbook*, edited by Frederick C. Burgwardt and Joseph M. Biedenbach. Washington, D.C.: American Society for Engineering Education, 1975a. Pp. 45-47.

_____. "A Guide for the Perplexed: The Theory and Practice of Higher Continuing Education." In *CES Directors Handbook*, edited by Frederick C. Burgwardt and Joseph M. Biedenbach. Washington, D.C.: American Society for Engineering Education, 1975b. Pp. 49-56.

Kaufman, H.G. "A Comparative Analysis of University Versus In-Company Continuing Education for Engineers." In *Maintaining Professional and Technical Competence of the Older Engineer—Engineering and Psychological Aspects*, edited by Samuel S. Dubin, Howard Shelton, and Joan McConnell. Washington, D.C.: American Society for Engineering Education, 1974. Pp. 179-186.

Knox, Alan B. "Life Long Self Directed Education." In *Fostering the Growing Need to Learn*, Q.v., pp. 65-131.

Kubat, Janice. "Correlates of Professional Obsolescence. Part 1." *Journal of Continuing Education in Nursing* 6 (November-December 1975): 22-24; "Part 2," Journal of Continuing Education in Nursing (January-February 1976): 18-22.

Leete, Burt A. "Continuing Legal Education: Should It Be Compulsory?" *Journal of Legal Education* 27 (1975): 110-115.

Lemberger, M.A., and McCormick, W.C. "Continuing Education as a Life-Long Process." *American Journal of Pharmaceutical Education* 40 (May 1976): 170-173.

Meyer, Thomas C. "Toward a Continuum in Medical Education." *Journal of Medical Education* 48 (December 1973): 67-70.

Muth, James E., Kirk, Kenneth W., and Weinswig, Melvin H. "Evaluation of a Continuing Education Course for Temporarily Non-practicing Pharmacists." *American Journal of Pharmaceutical Education* 40 (May 1976): 137-140.

National Institute of Mental Health. *Mental Health Continuing Education Programs for Long-Term Care Providers.* Washington, D.C.: U.S. Government Printing Office, 017-024-00458-8 [1975]. $1.75. HE 008 374. (RIE March 1977). MF-$0.96; HC-$6.31.

Nygaard, Debra, Director of Continuing Education, American Psychological Association. Conversation with author, October 29, 1976.

_____. "Continuing Education for Psychologists: APA's Role in Providing Guidelines and Direction." Paper presented at the Virginia Psychological Association Meeting, Virginia Beach, Virginia, April 30, 1976.

_____. "The Role of the APA in Continuing Psychological Education." Paper presented at APA Convention, Washington, D.C., September 5, 1976.

Okie, Susan. "Family Doctors Face Tests for Proficiency to Keep Certificates," *The Washington Post*, October 5, 1976, p. C8.

Richards, Robert K., and Stein, David. "Mandatory Continuing Education in Medicine: A Challenge to Adult Educators." *NUEA Spectator* 39 (September 1975): 20-24.

Roemer, Ruth. "Social Regulation of Health Manpower." In *Fostering the Growing Need to Learn*, Q.v., pp. 369-410.

The Role of Colleges and Universities in Continuing Education of Practicing Physicians in Communities Geographically Isolated from a Medical Teaching Center. Report prepared for the National Institute of Health. [1973]. ED 082 631. MF-$0.96; HC-$4.97.

Rubenstein, Edward. "Continuing Medical Education at Stanford: The Back-to-Medical-School Program." *Journal of Medical Education* 48 (October 1973): 911-918.

Shine, Elizabeth, and Frerich, Marian. "INA-CERP: The Review Process." *Journal of Continuing Education in Nursing* 7 (January-February 1976): 40-43.

Silvertson, Sigurd E., et al. "Individual Physician Profile: Continuing Education Related to Medical Practice." *Journal of Medical Education* 48 (November 1973): 1006-1012.

Skipper, James K., and King, James A. "Continuing Education: Feedback from the Grass Roots." *Nursing Outlook* 22 (April 1974): 252-253.

Spicer, Myrna R. "Traveling Teacher." *Journal of Continuing Education in Nursing* 6 (November-December 1975): 17-21.

Stuart, Corrine T. "Mandatory Continuing Education for Relicensure in Nursing and the Implications for Higher Education." *Journal of Continuing Education in Nursing* 6 (September-October 1975): 7-15.

Watkins, Roland L., Norwood, G. Joseph, and Meister, Fred L. "Improving the Quality of the Pharmacists as a Drug Advisor to Patients and Physicians Through Continuing Education." *American Journal of Pharmaceutical Education* 40 (February 1976): 34-39.

Weinswig, Melvin H. "Cassette Tape Courses for Health Professionals." Unpublished program description. Madison, Wisconsin: University of Wisconsin, December 1975.

Williams, J.D. *Continuing Education—A Management Point of View.* Paper presented at the Annual Meeting of the American Society for Engineering Education, Ft. Collins, Colorado, June 16-19, 1975. ED 118 457. MF-$0.96; HC-$1.88.

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